

Conversely, these participants had 3-doctor visits, one emergency room visit and two hospitalizations. Ninety-eight percent of the graduated participants reported being satisfied with the program. **CONCLUSIONS:** Enrollment in the CarePatterns Heart Monitoring program successfully trains participants to monitor their weight daily and develop an Action Plan. The monitoring program also increases overall retention and participants report strong satisfaction with the program. These factors all should contribute to lower medical utilization and improved clinical outcomes.

**PCV18**

**USE OF  $\beta$ -BLOCKERS FOR TREATING HEART FAILURE AMONG THE ELDERLY IN BRITISH COLUMBIA, CANADA, 1993–2001**

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Until the mid-1990s, Canadian consensus guidelines identified  $\beta$ -blocker therapy as being contraindicated for persons with heart failure (HF). Based on placebo-controlled randomized trials and economic evaluations that appeared subsequently, more recent consensus statements reversed that recommendation and advocated widespread use of  $\beta$ -blockers for moderate to severe HF. **OBJECTIVES:** Our goal was to estimate, among elderly persons discharged after a first HF hospitalization, the extent to which  $\beta$ -blocker use increased after the reversal in recommendations. **METHODS:** We carried out a retrospective cohort study using a linked administrative database of hospital separations and medication claims. Included were all residents of British Columbia, Canada (BC), aged 65 years and over, sent home after being hospitalized with a principal discharge diagnosis of HF during fiscal years 1990–2001. To eliminate prevalent hospitalizations, we excluded subjects discharged with any diagnosis of HF between 1990 and 1993. The proportion dispensed a  $\beta$ -blocker within 30 days of discharge was estimated for triennial periods and was modeled using logistic regression. **RESULTS:** For all subjects, the proportion dispensed a  $\beta$ -blocker after their first hospitalization for HF increased from 2.2% in 1993–95 through 4.0% in 1996–98 to 7.4% in 1998–2001 (crude odds ratio = 3.6; 95% confidence interval 3.3 to 3.9). **CONCLUSIONS:** In this population-based study, we found that in the latter half of the 1990s, there was a three-fold increase in the use of  $\beta$ -blocker therapy after an initial hospitalization for HF, consistent with new guidelines. However, absolute rates of  $\beta$ -blocker use remained lower than 10% in BC, indicating that many patients may yet be receiving the benefit.

**PCV19**

**TRENDS IN PHARMACY USE AMONG VETERANS WITH CHRONIC HEART FAILURE (1999–2002)**

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**OBJECTIVES:** To examine patterns of use of drugs for the treatment of chronic heart failure (CHF) and how these patterns change over time. **METHODS:** We identified a national cohort of patients with CHF in the Department of Veterans Affairs (VA) beginning October 1, 1998 (FY99) and obtained their outpatient pharmacy prescription fill records for FY99 through FY02. We tabulated the proportion of patients receiving filled prescriptions for several categories of drugs across years. To adjust for sever-

ity of illness and distinguish birth cohort effects from real changes in practice, patients were stratified based on number of years in the cohort. We then compared patterns of use between groups over time. **RESULTS:** The total number of patients ranged from 222,288 in FY99 to 301,485 in FY02. The average age(sd) ranged from 69.7(10.3) to 71.1(10.4). The most prevalent categories in FY99 were angiotensin-converting enzyme (ACE) or angiotensin II inhibitors (65.6%), loop diuretics (64.2%), digitalis glycosides (40.3%), calcium channel blockers (CCB, 37.0%), beta blockers (37.1%) and statins (36.3%). By FY02, digitalis and CCBs decreased to 34.0% and 32.4%, while beta blockers and statins increased to 54.0% and 51.8%, respectively. ACE or angiotensin II inhibitor and loop diuretic use remained relatively constant (69.3% and 62.3%, respectively). Among newly diagnosed patients, 40.6% in FY99 received beta blockers; in FY02, 58.8% were started on beta blockers. Of survivors from FY99, beta blocker use increased to 52.7% by FY02, indicating that 29.8% of surviving patients were added to beta blockers and/or survived longer than patients who were not started on that drug class. Similar patterns were observed within other groups. **CONCLUSIONS:** Pharmacotherapy patterns in the VA changed for patients with CHF from 1999 to 2002, as new evidence emerged from clinical trials. Future work will link these changes in process of care to survival, utilization and cost.

**PCV20**

**DECREASING HOSPITALIZATIONS FOR HEART FAILURE IN BRITISH COLUMBIA, CANADA, 1993–2001**

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**OBJECTIVE:** Heart failure (HF) is a debilitating chronic condition characterized by steady deterioration that is punctuated with acute episodes of decompensation requiring hospitalization. It is among the most costly conditions, consuming between two and 3% of health care budgets in western countries, 2/3 of which is spent on hospitalizations. During the 1980s, increasing age-specific hospitalization rates of HF were observed. However, there is little Canadian information on trends in HF hospitalizations during the 1990s, a period when efficacious therapies for HF, including angiotensin converting enzymes and  $\beta$ -blockers, were being progressively incorporated into clinical practice. **METHODS:** Using the hospital separations database, we obtained abstracts of all residents of British Columbia, Canada (BC), aged 40 years and over, having a principal discharge diagnosis of HF during fiscal years 1990–2001. To eliminate prevalent hospitalizations, we excluded subjects who were discharged with any diagnosis of HF between 1990 and 1993. Age- and sex-specific, and directly age-standardized, rates of initial HF hospitalization were estimated using population denominators. Poisson regression was used to model changes over time. **RESULTS:** For both women and men, age-standardized rates decreased 37% from 1993 to 2001. Decreases of this magnitude were observed over all ages. **CONCLUSIONS:** In this population-based study, we found that declines in rates of initial hospitalization for HF occurred in BC at the same time that efficacious therapies were incorporated into practice. While this finding is encouraging, alternative explanations such as concurrent hospital downsizing that restricted admission to more severe cases, must be ruled out before concluding that persons with HF were managed better.